



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

*[Signature]*

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/040,100  | 01/04/2002  | Paul L. Master       | 1030.024            | 8832             |
| 34756   | 7590        | 02/09/2007           | EXAMINER            |                  |
| GAMBURD LAW GROUP LLC<br>600 WEST JACKSON BLVD.<br>SUITE 625<br>CHICAGO, IL 60661 |             |                      | TRAN, NGHI V        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2151                |                  |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 02/09/2007 | PAPER         |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/040,100             | MASTER ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Nghi V. Tran           | 2151                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 November 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 and 39-53 is/are pending in the application.
  - 4a) Of the above claim(s) 23-38 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 and 39-53 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. This office action is in response to the amendment filed on November 05, 2006. Claims 1-11, 19, 21, 39-43 and 46-49 have been amended. No claims have been canceled. Claims 54-67 have been added. Claims 23-38 have been withdrawn. Therefore, claims 1-22 and 39-67 are presented for further examination.

***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-22 and 39-67 of the instance application are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-50 of U.S. Patent No. 6,618,434. Although the conflicting claims are not identical, they are

not patentably distinct from each other because the limitation of claims 11-22 and 39-67 of the instance application is overlapping with the limitation of claims 1-50 of U.S. Patent No. 6,618,434 as following:

| U.S. Patent No. 6,618,434   | Instant Application No. 10/040,100   |
|---|--|
| 1. A multimode rake receiver, comprising:<br><br>a network interface;   | 1. An apparatus for adaptive multimedia transmission and reception, the apparatus comprising:<br><br>a network interface;  |
| <u>a plurality of adaptive multimode rake fingers coupled to the network interface,</u><br><u>the plurality of adaptive multimode rake fingers comprising</u> a first plurality of heterogeneous computational elements<br><u>having at least two different fixed architectures,</u> wherein the first plurality of heterogeneous computational elements are configurable to form <u>the plurality of adaptive multimode rake fingers</u> , the first plurality of heterogeneous computational elements are capable of responding to a first mode signal to configure for a first | a plurality of heterogeneous computational elements, a first computational element of the plurality of heterogeneous computational elements having a first fixed architecture and a second computational element of the plurality of heterogeneous computational elements having a second, different fixed architecture; and |

|   |   |
|---|---|
| <p>functional mode for path reception, capable of responding to a second mode signal to configure for a second functional mode <u>for searching, and capable of responding to a third mode signal to configure for a third functional mode;</u> and</p>   |   |
| <p><u>a multimode processor coupled to the plurality of adaptive multimode rake fingers, the multimode processor capable of responding to the first mode signal to configure for the first functional mode for path reception, capable of responding to the second mode signal to configure for the second functional mode <u>for searching, and further capable of responding to the third mode signal to configure for a third functional mode.</u></u></p> | <p>an interconnection network couple to the network interface and to the plurality of heterogeneous computational elements, the interconnection network adapted, in response to first configuration information, to <i>configure a first plurality of input and output data connections among the plurality of heterogeneous computational elements for a first media functional mode of a plurality of media functional modes,</i> and the interconnection network further adapted, in response to <i>second configuration information, to configure a second plurality of input and output data connections among the plurality of heterogeneous computational elements for</i></p> |

|  |   |
|--|---|
|  | <i>a second, different media functional mode<br/>of the plurality of media functional modes,<br/>the plurality of media functional modes<br/>comprising an acquisition mode and a<br/>traffic mode.</i> |
|--|---|

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 8-11, 14-16, 20-22, 39-44, 46-52, and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacs et al., U.S. Patent Application Publication No. 2001/0003191 (hereinafter Kovacs) in view of Eriksson et al., United States Patent Number 6,563,891 (hereinafter Eriksson).

6. With respect to claims 1, 39, and 60-61, Kovacs teaches an apparatus for adaptive multimedia transmission and reception [fig. 1], the apparatus comprising:

- a network interface;

- a plurality of heterogeneous computational elements, a first computational element of the plurality of heterogeneous computational elements having a first fixed architecture and a second computational element of the plurality of heterogeneous computational elements having a second, different fixed architecture [paragraph 0036].

However, Kovacs does not explicitly show an interconnection network couple to the network interface and to the plurality of heterogeneous computational elements, the interconnection network adapted, in response to first configuration information, to configure a first plurality of input and output data connections among the plurality of heterogeneous computational elements for a first media functional mode of a plurality of media functional modes, and the interconnection network further adapted, in response to second configuration information, to configure a second plurality of input and output data connections among the plurality of heterogeneous computational elements for a second, different media functional mode of the plurality of media functional modes, the plurality of media functional modes comprising an acquisition mode and a traffic mode.

In a related art, Eriksson discloses or suggests an interconnection network couple to the network interface and to the plurality of heterogeneous computational elements, the interconnection network adapted, in response to first configuration information [col.4, ln.47 through col.5, ln.11], to configure a first plurality of input and output data [i.e. input and output signal, figs.4a&4b] connections among the plurality of heterogeneous computational elements for a first media functional mode [i.e. mode 1] of a plurality of media functional modes, and the interconnection network further adapted,

in response to second configuration information, to configure a second plurality of input and output data connections among the plurality of heterogeneous computational elements for a second, different media functional mode of the plurality of media functional modes, the plurality of media functional modes [i.e. a variety of modes such as mode 1, mode 2, mode 3, and mode 4, fig.8] comprising an acquisition mode [col.13, ln.20 through col.14, ln.42] and a traffic mode [col.8, ln.41 through col.9, ln.49] [fig.8].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson by configuring a first and second plurality of input and output data connections among the plurality of heterogenous computational elements for a second, different media functional mode of the plurality of media functional modes comprising a traffic mode and an acquisition mode because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

7. With respect to claims 2 and 40, Kovacs does not explicitly show wherein the plurality of media functional modes include an idle mode.

In a communication system, Eriksson suggests wherein the plurality of media functional modes include an idle mode [col.6, Ins.31-44].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson by including an idle mode because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

8. With respect to claims 3, 41, and 62, Kovacs does not explicitly show wherein the acquisition mode includes a channel acquisition mode and a control processing mode.

In a communication system, Eriksson suggests wherein the acquisition mode includes a channel acquisition mode and a control processing mode [col.13, ln.20 through col.14, ln.42].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson by including a channel acquisition mode and a control processing mode because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

9. With respect to claims 4-6, 42-44, and 63-64, Kovacs does not explicitly show wherein the traffic mode includes a voice reception mode, a voice transmission mode, and a control processing mode.

In a communication system, Eriksson suggests wherein the acquisition mode includes a channel acquisition mode and a control processing mode [col.6, Ins.15-31 and fig.8].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson by including a voice reception mode, a voice transmission mode, and a control processing mode because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

10. With respect to claims 8 and 46, Kovacs further teaches wherein the interconnection network is further operative to configure the plurality of heterogeneous computational elements for media reception on a plurality of frequencies [paragraphs 0036 and 0067].

11. With respect to claims 9, 11, 47 and 49, Kovacs does not explicitly show wherein the interconnection network is further operative to configure the plurality of

heterogeneous computational elements for media reception in a plurality of time division multiple access (TDMA) time slots.

In a communication system, Eriksson suggests wherein the interconnection network is further operative to configure the plurality of heterogeneous computational elements for media reception in a plurality of time division multiple access (TDMA) time slots [col.7, Ins.6-65].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson by configuring the plurality of heterogeneous computational elements for media reception in a plurality of TDMA time slots because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

12. With respect to claims 10 and 48, Kovacs further teaches wherein the interconnection network is further operative to configure the plurality of heterogeneous computational elements for media transmission on a plurality of frequencies [i.e. Bluetooth, IEEE 802.11, ... fig.1].

13. With respect to claims 14-16, Kovacs does not explicitly show a memory coupled to the plurality of heterogeneous computational elements and to the interconnection network, the memory operative to store the first configuration information and the second configuration information.

In a wireless communication system, Eriksson discloses a memory [i.e. memory 100] coupled to the plurality of heterogeneous computational elements [i.e. different types of receive processing operations, see abstract] and to the interconnection network, the memory operative to store the first configuration information and the second configuration information [fig.8].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view Fishman by operating to store the first configuration information and the second configuration information because this feature can be optimized for different type of receive processing operation, e.g., traffic reception and measurement of other channels [Eriksson, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to allow power to be reduced while improving quality measures on an active call connection [Eriksson, col.3, Ins.10-30].

14. With respect to claims 20 and 50, Kovacs further teaches wherein apparatus is embodied within a mobile station [i.e. base station 15] having a plurality of operating modes [fig.1].

15. With respect to claim 21, Kovacs further teaches wherein the plurality of operating modes of the mobile station includes mobile telecommunication, personal digital assistance, multimedia reception, mobile packet-based communication, and paging [fig.1].

16. With respect to claim 51, Kovacs further teaches wherein the plurality of operating modes of the mobile station includes mobile telecommunication, personal digital assistance, multimedia reception, mobile packet-based communication, and paging [fig.1].

17. With respect to claims 22 and 52, Kovacs further teaches wherein a first portion of the plurality of heterogeneous computational elements are operating in the first media functional mode while a second portion of the plurality of heterogeneous computational elements are being configured for the second media functional mode [paragraph 0036].

18. Claims 7, 12-13, 17-19, 45, 53-58, and 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacs in view of Eriksson n as applied to claims 1, 39, and 60 above, and further in view of Jokinen et al., U.S. Patent Application Publication No. 2003/0026242 (hereinafter Jokinen).

19. With respect to claims 7, 17, 45, 53, and 65, Kovacs does not explicitly show wherein the control processing mode includes processing of a plurality of GSM control

channels, the plurality of GSM control channels including a broadcast control channel (BCCH), a frequency-correction channel, a synchronization channel (SCH), a plurality of common control channels (CCCH), a slow associated control channels (SACCH), and a fast associated control channel (FACCH).

In a communication system, Jokinen suggests wherein the control processing mode includes processing of a plurality of GSM control channels, the plurality of GSM control channels including a broadcast control channel (BCCH), a frequency-correction channel, a synchronization channel (SCH), a plurality of common control channels (CCCH), a slow associated control channels (SACCH), and a fast associated control channel (FACCH) [paragraphs 0057-0058 and 0006].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson, and further in view of Jokinen by including processing of a plurality of GSM control channels, the plurality of GSM control channels including a broadcast control channel (BCCH), a frequency-correction channel, a synchronization channel (SCH), a plurality of common control channels (CCCH), a slow associated control channels (SACCH), and a fast associated control channel (FACCH) because this feature will be transmitted on the hopping sequences of the other base stations [Jokinen, paragraph 0022]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to use the information to make a handover decision [Jokinen, paragraph 0004].

Art Unit: 2151

20. With respect to claims 12-13, Kovacs does not explicitly show a timing unit coupled to the network interface and the timing unit operative to provide synchronization and oversampling.

In a communication system, Jokinen suggests a timing unit coupled to the network interface and the timing unit operative to provide synchronization and oversampling [paragraphs 0033-0035].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson, and further in view of Jokinen by operating the timing unit to provide synchronization and oversampling because this feature will be transmitted on the hopping sequences of the other base stations [Jokinen, paragraph 0022]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to use the information to make a handover decision [Jokinen, paragraph 0004].

21. With respect to claims 18-19, 54-58, and 66-67, Kovacs does not explicitly show the controller operative to direct and schedule the configuration of the plurality of heterogeneous computational elements for the first functional mode and the reconfiguration of the plurality of heterogeneous computational elements for the second functional mode.

In a communication system, Jokinen suggests the controller operative to direct and schedule the configuration of the plurality of heterogeneous computational elements for the first functional mode and the reconfiguration of the plurality of

heterogeneous computational elements for the second functional mode [paragraphs 0033-0035].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Kovacs in view of Eriksson, and further in view of Jokinen by scheduling the configuration of the plurality of heterogeneous computational elements for the first function mode because this feature will be transmitted on the hopping sequences of the other base stations [Jokinen, paragraph 0022]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to use the information to make a handover decision [Jokinen, paragraph 0004].

### ***Response to Arguments***

22. Applicant's arguments with respect to claims 1-22 and 39-53 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 2151

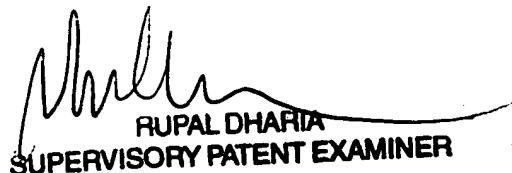
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi Tran  
Patent Examiner  
Art Unit 2151



RUPAL DHARIA  
SUPERVISORY PATENT EXAMINER